Attachment J01

Fort Gordon Electrical Distribution System

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J01 Fort Gordon Electrical Distribution System

J01.1 Fort Gordon Overview

Fort Gordon is a U.S. Army installation located on 55,000 acres nine miles northwest of Augusta, Georgia. It was activated in December 1941 and named in honor of Confederate General John Brown Gordon. Fort Gordon is the home of the Signal Corps Training Center and is dedicated to training soldier-technicians in the installation, operation and maintenance of the Army's modern communication-electronics equipment. Located at the installation is the 400 bed Dwight David Eisenhower Army Medical Center.

J01.2 Electrical Distribution System Description

The Fort Gordon electric distribution system consists of all appurtenances physically connected to the distribution system from the point in which the distribution system enters the installation, and/or Government ownership currently, starts to the point of demarcation defined by the real estate instruments. Generally, the point of demarcation will be the building footprint. The system may include, but is not limited to, substations, transformers, underground and overhead circuits, utility poles, switches, vaults, and lighting fixtures. The following description and inventory is included to provide the Offeror with a general understanding of the size and configuration of the distribution system. The inventory is assumed to be approximately 90 percent complete. The Offeror shall base the proposal on site inspections, information in the bidders' library, other pertinent information, and to a lesser degree the following description. Under no circumstances shall the successful Contractor be entitled to any rate adjustments based on the accuracy of the following description and inventory.

J01.2.1 Electrical Distribution System Fixed Equipment Inventory

Fort Gordon currently purchases electrical power from the Georgia Power Company (GPC). The electric system at Ft. Gordon receives 115 kV primary input at two jointly owned and operated substations that provide electrical power to the entire military facility. GPC provides single 115 kV transmission feeders to each of the substations and GPC owns the high side transformers and protection equipment in each substation. GPC metering equipment is also installed at each location.

Fort Gordon owns an electric distribution system consisting of:

- ?? Approximately 66 circuit miles of 12.47/4.16 kV overhead power distribution lines
- ?? Approximately 15.7 circuit miles of 12.47/4.16 kV underground distribution lines
- ?? Approximately 34 circuit miles of overhead/ underground street lighting circuits
- ?? Portions of two power distribution substations

A private contractor, Johnson Controls World Service, maintains these facilities. The Main Substation has two GPC owned 20 MVA transformers (115/12.47 kV). The Army owns the low-side equipment that includes one 1200 amp, 12.47 kV circuit breaker and one 12.5 MVA transformer (12.47/4.16 kV). The Army has two bus voltage levels in the Main Substation; i.e., 12.47 kV and 4.16 kV. On the 4.16 kV side there are five 600-amp circuit breakers and on the 12.47 kV side there are fourteen 1200 amp circuit breakers.

The Hospital Substation has one GPC owned 5 MVA transformer (115/12.47 kV). The Army owns the low side equipment that includes a 1,000-kVA regulator and three 1200 amp circuit breakers.

Ft. Gordon has installed a lineup of nine 1.5 MW diesel generators near the Main Substation. The generators produce approximately 13.5 MW of power for peak load service. A bus modification was made at the Main Substation to accommodate the peak generation input. The diesel generators require manual start up and manual switching to tie into the Main Substation bus. These diesel generator facilities are not included in this inventory. The line of demarcation is the connection at the three transformers at the 13.5 MW generator site.

The electric distribution system at Fort Gordon was initially constructed in the 1941 – 42 period. The distribution system has been revised from time to time to accommodate load requirements. The present electrical network consists of both overhead and underground circuits. The overhead circuits are installed on single wood poles with conventional type insulators installed on upswept pins or on wood cross-arms. Pole mounted distribution transformers are installed near individual load centers. The average age of overhead facilities is about 30 years. The underground portion of the electrical network consists of both duct bank installations and direct buried power cables. Pad mounted distribution transformers are installed near load centers. The average age of the underground portion system is about 25 years.

The electrical distribution system at the Fort Gordon recreation area is a 13,800/7,980-volt, 3 phase, 4 wire, wye, grounded system and includes distribution to sewage lift station. Fort Gordon currently purchases electrical power from the Georgia Power Company (GPC) for the recreation area.

J01.2.1.2 Inventory

Table 1 provides a general listing of the major electrical system fixed assets for the Fort Gordon electrical distribution system included in the purchase. The system will be sold in an "as is, where is" condition without any warrant, representation, or obligation on the part of the Government to make any alterations, repairs, or improvements. All ancillary equipment attached to and necessary for operating the system, though not specifically mentioned here in, is considered part of the purchased utility.

Table 1
Fixed Inventory
Electrical Distribution System Inventory, Fort Gordon

Item	Size	Quantity	Unit	Approximate Age/Year of Construction
Structures/Buswork		2	bay	31 years/1970
High Side Circuit Breakers		1	ea	31 years/1970
Power Transformers		12.5	MVA	25 years/1976
Low-Side Switchgear - Breakers		19	ea	31 years/1970
Overhead Distribution Lines				24 years/1977
3 Phase Large Conductor		104,460	ft	
3 Phase Small Conductor		245,172	ft	
1 Phase conductor		208,808	ft	
Secondary		139,608	ft	
Subtotal Overhead Lines		698,048	ft	
Overhead Equipment				
Group-Op Air Break Switch		10	ea	24 years/1977
Underground Distribution Lines				16 years/1985
3 Phase Large Conductor		36,807	ft	
3 Phase Small Conductor		23,639	ft	
1 Phase conductor		5,898	ft	
Secondary		16,584	ft	
Subtotal Underground Lines		82,928	ft	
Underground Equipment				16 years/1985
Prim. Sectionalizing Switch		3	ea	
Street/Security/Parking Lot Lights		5,000		16 years/1985
Fixtures		3,436	Ea	
Poles		579	Ea	

Lighting Circuits		179,309	Ft	16 years/1985
Total Linear Feet		960,285	Ft	
Services				20 years/1981
3 Phase		565	Ea	
1 Phase		1,151	Ea	
Subtotal Services		1,716	Ea	
Transformers - Pole Type				25 years/1976
15 kVA & Smaller		328	Ea	
25 kVA		171	Ea	
37.5 kVA		175	Ea	
50 kVA		200	Ea	
75 kVA		143	Ea	
100 kVA		33	Ea	
250 kVA		3	Ea	
333 kVA		2	Ea	
Subtotal Pole Type		1,055	Ea	
Transformers - Pad Type				25 years/1976
1 Ph - 15 kVA and smaller		1	Ea	
1 PH - 25 kVA		1	Ea	
1 PH - 37.5 kVA		2	Ea	
1 Ph - 50 kVA		11	Ea	
1 Ph - 75 kVA		10	Ea	
1 Ph - 100 kVA		1	Ea	
3 Ph - 112 kVA and smaller		34	Ea	
3 Ph - 150 kVA		13	Ea	
3 Ph - 225 kVA		7	Ea	
3 Ph - 300 kVA		46	Ea	
3 Ph - 500 kVA		19	Ea	
3 Ph - 750 kVA		9	Ea	
3 Ph - 1000 kVA		8	Ea	
3 Ph - 1500 kVA		4	Ea	
3 Ph - 2000 kVA		1	Ea	
3 Ph - 2500 kVA		2	Ea	
3 Ph - 30000 kVA		1	Ea	
Subtotal Pad Mount Type		170	Ea	

Total Transformers		1,225	Ea	

Notes:
For linear footage figures above, 3-phase cable (3 conductors plus ground) is counted as one entity, not four separate wires. Thus 500 linear foot of 3-phase cable is counted as 500 linear feet, NOT 4 wiresx500=2000 linear feet.

kVA = nominal kilovolt amperes
Ea = each
LF = linear feet
Bldg. = building
Ph = Phase

J01.2.2 Electrical Distribution System Non-Fixed Equipment and Specialized Tools Inventory

Table 2 lists other ancillary equipment (spare parts) and Table 3 lists specialized vehicles and tools included in the purchase. Offerors shall field verify all equipment and tools prior to submitting a bid. Offerors shall make their own determination of the adequacy of all equipment and tools. The successful Contractor shall provide any and all equipment, vehicles, and tools, whether included in the purchase or not, to maintain a fully operating system under the terms of this contract.

Table 2
Spare Parts
Electrical Distribution System Fort Gordon

Item	Size	Quantity	Unit	Approximate Ye ar of Construction
None Identified				

Fort Gordon maintains an inventory of spare parts for the electrical distribution system. Contents of the inventory vary as items are used and/or purchased. Availability of this inventory to the new owner will be negotiated before or during the transition period.

Table 3
Specialized Equipment and Vehicles
Electrical Distribution System Fort Gordon

Item	Size	Quantity	Unit	Approximate Year of Construction
None Identified				

J01.2.3 Electrical System Manuals, Drawings, and Records Inventory

Table 4 lists the manuals, drawings, and records that will be transferred with the system.

Table 4
Manuals, Drawings, and Records
Electrical Distribution System Fort Gordon

Fort Gordon maintains a limited collection of technical manuals, drawings and records on the installed components of the electrical distribution system. This information will be transferred to the new owner during the transition period. System maps will be available in the bidders library.

J01.3 Current Service Arrangement

Fort Gordon purchases all of its electric requirements from Georgia Power Company. Due to the possibility of legislation that will allow electric customers to choose power suppliers, the Request for Proposal will only address the distribution costs. The cost of purchased electric power has therefore been omitted from the baseline cost of service, as it will be identical before and after privatization.

J01.4 Secondary Metering

Fort Gordon may require secondary meters for internal billings of their reimbursable customers, utility usage management, and energy conservation monitoring. The Contractor shall assume full ownership and responsibility for existing and future secondary meters IAW paragraph C.3.

J01.4.1 Existing Secondary Meters

Table 5 provides a listing of the existing (at the time of contract award) secondary meters that will be transferred to the Contractor. The Contractor shall provide meter readings once a month for all secondary meters IAW solicitation paragraph H.5 and paragraph J01.5 below.

Table 5
Existing Secondary Meters
Electrical Distribution System Fort Gordon

Bldg. No./Meter No.	Meter Description
13803/39933327	GSA TMP
14500/39500123	Consolidated Maint Fac
13302/84199459	RTS Med Site
13401/86262294	Region Al Training Site
14401/31050439	600 Man Army Reserve Ctr
NA/87918114	Region Al Training Site
NA/8791811	Region/Al Training Site
15500/84133670	DCA – Bingo Palace
18400/82878158	DCA – Em Club
18400/82799542	DCA – Em Club
18402/82781469	DCA – Nco Club
NA/98730456	First Union Atm – Nco Club
25411/2299762	Pioneer – Barracks Upgrd
25412/2299751	Pioneer – Barracks Upgrd
25416/2299758	Pioneer – Barracks Upgrd
30302/55039879	AAFES – Car Wash
30301/27002867	DCA Self Storage Facility
31300/71283110	AAFES – Class VI Store
32101/92578894	Performing Arts Props Fac
35200/646588843	AAFES – Main Exchange
37200/30932543	Commissary
38200/95813609	New Main Px
37302/83039480	DCA – Stinson Guest Ext
37300/55014480	DCA – Stinson Guest House
36305/NA	Credit Union
36302/55404978	Postal Service
36300/77986006	1st Union Nation/Al Bank
36200/50884273	DCA – Travel Office

35202/18150023	AAFES – Concess. “B”
35201/62203989	AAFES – Concess. “A”
33200/90197309	DCA – Bowling Alley #1
35402/82793926	AAFES – Burger King
49300/ 92514507	AAFES – Service Station
R1432/72161148	Southern Bell
36710/95930761	DCA – OFFICER’S CLUB POOL
36708/91462063	DCA – OFFICER’S CLUB
R1435/72160184	Southern Bell Comm Hut
34610/67075500	DCA – Golf Club Hse
33720/95259920	First Union – ATM
250/86189982	DCA – Griffith Lounge
100/12631257	AAFES – Gate 1 Shoppette
N/A/85505423	N/Ation/Al Science Center
21610/97699402	1st Union – ATM, Signal Th
29808/55136093	Cafeteria – Signal Towers
29808/51014191	Cafeteria – Sign/Al Towers
21711/51022225	AAFES Branch
21711/49832805	AAFES – Barber Shop
25711/50959629	AAFES Branch
25711/32702367	AAFES Concession/Aire
25711/49724675	AAFES – Barber Shop
29604/50734787	AAFES Branch
29604/47771153	AAFES – Barber Shop
29604/47762477	AAFES Concession/Aire
29706/95878768	Printing Plant
29606/63281451	AAFES – Western Union
N/A/63924975	DCA – Mirror Lake
N/A/82707158	DCA – Gordon Lakes Golf
536/62063124	DCA – Gordon Lakes Golf
465/83309858	DCA – Leitner Lake
509/83686391	DCA – Riding Stables

N/A/83358127	Rental Trailers
N/A/82774815	Rental Trailers
N/A/85530677	Rental Trailers
N/A/83309623	Rental Cabins
N/A/83309857	Rental Cabins
N/A/83686395	Boat Docks
CH08/83309624	Equipment Rental
N/A/83309856	Marina
CH02/21152183	Cabin
N/A/80994442	Rental Trailers
2323/NA	N/A
2324/NA	N/A
2325/NA	N/A
2327/NA	N/A
39109/NA	N/A
39117/NA	N/A
40701/NA	N/A
40707/NA	N/A
40709/NA	N/A
39710/NA	N/A
39718/NA	N/A
39719/NA	N/A
38803/NA	N/A
38802/NA	N/A
38801/NA	N/A
38717/NA	N/A
38715/NA	N/A
38707/NA	N/A
38713/NA	N/A
38711/NA	N/A
38703/986740693870	N/A
280/34094086	N/A

300/NA	N/A
308/NA	79141934
315/NA	N/A
317/NA	N/A
319/NA	N/A
320/NA	N/A
357/NA	N/A
358/NA	N/A
33800/NA	N/A
29709/NA	N/A
29605/NA	N/A
25712/NA	N/A
21712/NA	N/A
25501/NA	N/A
500/NA	N/A

J01.4.2 Required New Secondary Meters

The Contractor shall install and calibrate new secondary meters as listed in Table 6. New secondary meters shall be installed IAW paragraph C.13, Transition Plan. After installation, the Contractor shall maintain and read these meters IAW paragraphs C.3, H.5, and J01.5 below.

Table 6
New Secondary Meters
Electrical Distribution System Fort Gordon

Meter Location	Meter Description
None Required	

J01.5 Monthly Submittals

The Contractor shall provide the Government monthly submittals for the following: Invoice (IAW paragraph G.2). The Contractor's monthly invoice shall be presented in a format proposed by the Contractor and accepted by the Contracting Officer. Invoices shall be submitted by the 25th of each month for the previous month. Invoices shall be submitted to the Contracting Officer's designee. (This information will be provided upon award)

Outage Report. The Contractor's monthly outage report will be prepared in the format proposed by the Contractor and accepted by the Contracting Officer. Outage reports shall include the following information for Scheduled and Unscheduled outages:

Scheduled: Requestor, date, time, duration, facilities affected, feedback provided during outage, outage notification form number, and digging clearance number.

Unscheduled: Include date, time and duration, facilities affected, response time after notification, completion times, feedback provided at time of outage, specific item failure, probability of future failure, long term fix, and emergency digging clearance number.

Outage reports shall be submitted by the 25th of each month for the previous month. Outage reports shall be submitted to the Contracting Officer's designee. (This information will be provided upon award)

Meter Reading Report. The monthly meter reading report shall show the current and previous month readings for all secondary meters. The Contractor's monthly meter reading report will be prepared in the format proposed by the Contractor and accepted by the Contracting Officer. Meter reading reports shall be submitted by the 15th of each month for the previous month. Meter reading reports shall be submitted to the Contracting Officer's designee. (This information will be provided upon award)

System Efficiency Report. If required by paragraph C.3, the Contractor shall submit a system efficiency report in a format proposed by the Contractor and accepted by the Contracting Officer. System efficiency reports shall be submitted by the 25th of each month for the previous month. System efficiency reports shall be submitted to the Contracting Officer's designee. (This information will be provided upon award)

J01.6 Energy Savings Projects

IAW paragraph C.3, Utility Service Requirement, the following projects have been implemented by the Government for managing and monitoring utility systems and energy conservation:

Project Location	Project Description
Approximately 50 Fort Gordon Permanent Buildings	Energy Savings Performance Contracting (ESPC) Lighting/Ballast Retrofit Task Order No. 001 of Huntsville Contract No. DACA-87-97-D-0015 (20 year term) Completed 9/00

Building 29802/29803, Moran Hall 13.5 Megawatt Generating Plant Postwide Utility Monitoring & Control System (UMCS)	(ESPC) Task Order No. 002 of Huntsville Contract No. DACA-87-97-D-0015 (20 year term) Replaces chilled water distribution piping in Moran Hall UMCS operations & maintenance 13.5 Generating Plant operations & maintenance Construction phase is ongoing & scheduled to complete in FY 02
Building 20400, Luketina Hall Building 21401, Vincent Hall Building 25801, Cobb Hall Building 24701, Back Hall Main Electrical Substation 13.5 Megawatt Generating Plant	Delivery order DABT11-00-F-0042 to Contract No. GS-OOP-96-96-BSD-0022 to install contractor owned and maintained utility metering.

J01.7 Service Area

IAW paragraph C.4, Service Area, the service area is defined as all areas within the Fort Gordon boundaries and at the National Science Center.

J01.8 Off-Installation Sites

There are approximately 4 circuit miles of overhead power distribution lines. There are approximately 50 pole-mounted transformers. The transformer size range is 10kVA – 50 kVA. There are approximately 100 poles. The lengths are 30 feet, 35 feet, 40 feet, and 45 feet. Generally, the system services recreational trailer platforms and associated ancillary buildings & facilities. The Corps of Engineers owns the system. Johnson Controls World Services, maintains these facilities. As such, the Offeror's proposal should address maintenance of this system only. The average age of the system is about 25 years.

J01.9 Specific Transition Requirements

IAW paragraph C.13, Transition Plan, Table 7 lists service connections and disconnections required upon transfer, and Table 8 lists the improvement projects required upon transfer of the Fort Gordon electrical distribution system.

Table 7
Service Connections and Disconnections
Electrical Distribution System Fort Gordon

Location	Description

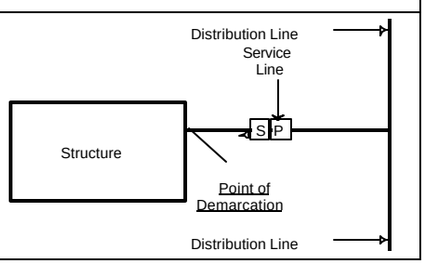
None Required

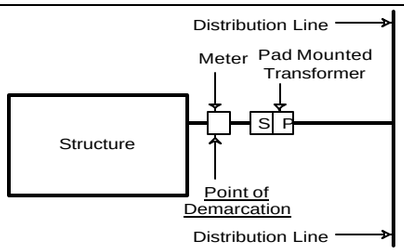
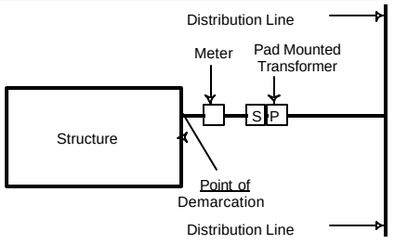
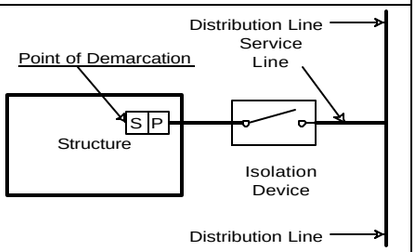
Table 8
System Improvement Projects
Electrical Distribution System Fort Gordon

Project Location	Project Description
Bury overhead distribution system	1. Replace all overhead distribution lines with underground distribution in the non-industrial Fort Gordon areas. 2. Install a minimum number of new feeders from substation to feed the existing load. The new feeders should utilize a larg cable employing directional boring and/or uct system. Replace existing transformers with lo op-feed transformers. Also, install multi-dire tional switches in the system to allow back-feeding f om other electrical feeders.

J01.10 Electric Distribution System Points of Demarcation

The point of demarcation is defined as the point on the distribution system where ownership changes from the Grantee to the building owner. This point of demarcation will typically be at the point the utility enters a building structure or the load side of a transformer within a building structure. The table below identifies the type and general location of the point of demarcation with respect to the building for each scenario. During the operation and maintenance transition period, concurrence on specific demarcation points will be documented during the joint inventory of facilities.

Point of Demarcation	Applicable Scenario	Sketch
Point of demarcation is the first point of disconnect at or in the facility.	Pad Mounted Transformer located outside of structure with underground service to the structure and no meter exists.	

Point of Demarcation	Applicable Scenario	Sketch
Down current side of the meter	Residential service (less than 200 amps and 240V 1-Phase), and three phase self contained meter installations. Electric Meter exists within five feet of the exterior of the building on an underground secondary line.	
Point of demarcation is the first point of disconnect at or in the facility.	Three Phase CT metered service.	
Secondary terminal of the transformer inside of the structure	Transformer located inside of structure and an isolation device is in place with or without a meter Note: Utility Owner must be granted 24-hour access to transformer room.	
Secondary terminal of the transformer inside of the structure	Transformer located inside of structure with no isolation device in place. Note: Utility Owner must be granted 24-hour access to transformer room.